

# Standards Correlations

## Electricity I (8533)

Task	SOL Correlations	NCCER Correlations
<b>Demonstrating Personal Qualities and Abilities</b>		
Demonstrate creativity and innovation.	English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1	
Demonstrate critical thinking and problem solving.	English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8,	

Task	SOL Correlations	NCCER Correlations
	A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1	
Demonstrate initiative and self-direction.	English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
<b>Demonstrating Interpersonal Skills</b>		
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1	
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	

<b>Task</b>	<b>SOL Correlations</b>	<b>NCCER Correlations</b>
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1	
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
<b>Demonstrating Professional Competencies</b>		
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4	
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	

Task	SOL Correlations	NCCER Correlations
	Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1	
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8	
Demonstrate information-literacy skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1	
Demonstrate an understanding of information security.	English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: COM.10	

Task	SOL Correlations	NCCER Correlations
Maintain working knowledge of current information-technology (IT) systems.	English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17 Science: BIO.1, CH.1, ES.1, PH.1	
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1	
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1	
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1	

Task	SOL Correlations	NCCER Correlations
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1	
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1	
<b>Examining All Aspects of an Industry</b>		
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16	
Examine aspects of management within an industry/organization.		
Examine aspects of financial responsibility within an industry/organization.		
Examine technical and production skills required of workers within an industry/organization.		
Examine principles of technology that underlie an industry/organization.		
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16	

<b>Task</b>	<b>SOL Correlations</b>	<b>NCCER Correlations</b>
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16	
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16	
<b>Addressing Elements of Student Life</b>		
Identify the purposes and goals of the student organization.		
Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		
Identify Internet safety issues and procedures for complying with acceptable use standards.		
<b>Exploring Work-Based Learning</b>		
Identify the types of work-based learning (WBL) opportunities.		
Reflect on lessons learned during the WBL experience.		

Task	SOL Correlations	NCCER Correlations
Explore career opportunities related to the WBL experience.		
Participate in a WBL experience, when appropriate.		
<b>Applying Basic Construction Safety Standards (Core Safety)</b>		
Comply with federal, state, and local safety legal requirements.	English: 10.5, 11.5  Science: CH.1	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> 00106 Introduction to Basic Rigging
Maintain a safe working environment.	English: 10.5, 11.5  History and Social Sciences:  WHII 8, VUS 8	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Explain safe working practices around electrical hazards.	English: 10.5, 11.5  History and Social Sciences:	NCCER Core Curriculum: Introduction to Basic Construction, 2021

Task	SOL Correlations	NCCER Correlations
	VUS 8  Science: PH.1	<ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul>
Identify emergency first aid procedures.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul>
Identify the types of fires and the methods used to extinguish them.	English: 10.5, 11.5  Science: CH.1	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 0010 Basic Safety</li> </ul>
Identify personal protective equipment (PPE) requirements.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>

Task	SOL Correlations	NCCER Correlations
Inspect course-specific hand and power tools to visually identify defects.	English: 10.5, 11.5	<p>NCCER Core Curriculum: Introduction to Basic Construction, 2021</p> <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> <li>• 00103 Introduction to Hand Tools</li> <li>• 00104 Introduction to Power Tools</li> </ul>
Demonstrate lifting and carrying techniques.		<p>NCCER Core Curriculum: Introduction to Basic Construction, 2021</p> <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> <p>NCCER Electrical Level 1, 2020</p> <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Demonstrate laddering techniques.		<p>NCCER Core Curriculum: Introduction to Basic Construction, 2021</p> <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul>

Task	SOL Correlations	NCCER Correlations
		NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Demonstrate scaffolding techniques.		NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Demonstrate lockout/tagout procedures.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>

Task	SOL Correlations	NCCER Correlations
Report injuries.	English: 10.6, 10.7, 11.6, 11.7	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul>
Report personal, environmental, and equipment safety violations to the appropriate authority.	English: 10.1, 10.6, 10.7, 11.1, 11.6, 11.7	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Earn the OSHA 10 card.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>

Task	SOL Correlations	NCCER Correlations
Pass safety exam.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020  26102-20 Safety for Electricians
<b>Focusing on the Electrician's Profession</b>		
Explain electrician-specific safety issues.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00101 Basic Safety</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> </ul>
Discuss current topics in the industry.	English: 10.1, 11.1	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00100 Build Your Future in Construction</li> <li>• 00108 Basic Employability Skills</li> </ul>

Task	SOL Correlations	NCCER Correlations
Explore the various occupations available in electricity and related fields.	English: 10.5, 11.5	<p>NCCER Core Curriculum: Introduction to Basic Construction, 2021</p> <ul style="list-style-type: none"> <li>• 00100 Build Your Future in Construction</li> <li>• 00108 Basic Employability Skills</li> </ul> <p>NCCER Electrical Level 1, 2020</p> <ul style="list-style-type: none"> <li>• 26101 -20 Occupational Overview: The Electrical Industry</li> </ul>
Investigate career opportunities in the electrical industry.	English: 10.5, 11.5	<p>NCCER Electrical Level 1, 2020</p> <ul style="list-style-type: none"> <li>• 26101 – 20 Occupational Overview: The Electrical Industry</li> </ul>
Investigate postsecondary training and licensing in the electricity field.	English: 10.5, 11.5	<p>NCCER Electrical Level 1, 2020</p> <ul style="list-style-type: none"> <li>• 26101 – 20 Occupational Overview: The Electrical Industry</li> </ul>
Describe the employee’s role in ensuring the success of the electrical business.	English: 10.5, 11.5	<p>NCCER Electrical Level 1, 2020</p>

Task	SOL Correlations	NCCER Correlations
		<ul style="list-style-type: none"> <li>• 26101 – 20 Occupational Overview: The Electrical Industry</li> </ul>
Identify national and local trade organizations.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26101 – 20 Occupational Overview: The Electrical Industry</li> </ul>
<b>Using Tools and Materials</b>		
Use the various types of hand tools used by electricians.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00103 Introduction to Hand Tools</li> </ul>
Use the various types of power tools used by electricians.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00104 Introduction to Power Tools</li> </ul>
Identify commonly used materials by name and by regional variance of terminology.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26108-20 Wireways, Raceways, and Fittings</li> </ul>

<b>Task</b>	<b>SOL Correlations</b>	<b>NCCER Correlations</b>
Prepare a material inventory.	English: 10.6, 10.7, 11.6, 11.7	
<b>Applying Basic Electrical Theory</b>		
Explain basic electrical theory.	English: 10.5, 11.5  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> </ul>
Explain the relationship of electron theory to circuit design, using Ohm's Law.	English: 10.5, 11.5  Mathematics: AII.3, AII.10  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> </ul>
Use a variety of meters to take readings.	Science: PH.11, PH.1	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26102-20 Safety for Electricians</li> <li>• 26112-20 Electrical Test Equipment</li> </ul>
Calculate series circuits.	English: 10.5, 11.5  Mathematics: AII.3, AII.5, AII.10  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> <li>• 26111-20 Residential Wiring</li> </ul>

<b>Task</b>	<b>SOL Correlations</b>	<b>NCCER Correlations</b>
Wire a series circuit.	English: 10.6, 10.7, 11.6, 11.7  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> <li>• 26111-20 Residential Wiring</li> </ul>
Calculate parallel circuits.	English: 10.5, 11.5  Mathematics: AII.3, AII.5  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> <li>• 26111-20 Residential Wiring</li> </ul>
Wire parallel circuits.	English: 10.5, 11.5  Science: PH.11	NCCER Electrical Level 1, 2020  <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> <li>• 26111-20 Residential Wiring</li> </ul>
<b>Solving Mathematical Problems Related to the Electrical Field</b>		
Solve word problems involving whole numbers, fractions, and decimals.	English: 10.5, 11.5  Science: PH.11	NCCER Core Curriculum: Introduction to Basic Construction, 2021

Task	SOL Correlations	NCCER Correlations
		<ul style="list-style-type: none"> <li>• 00102 Introduction to Construction Math</li> </ul>
Solve algebraic formulas pertaining to electrical applications.	English: 10.5, 11.5 Mathematics: AII.3, AII.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00102 Introduction to Construction Math</li> </ul>
Solve problems involving percentage, ratio, and proportion.	English: 10.5, 11.5	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00102 Introduction to Construction Math</li> </ul>
Measure distances using scales and measuring devices.	English: 10.5, 11.5 Science: ES.1	NCCER Core Curriculum: Introduction to Basic Construction, 2021  <ul style="list-style-type: none"> <li>• 00102 Introduction to Construction Math</li> </ul>
<b>Interpreting Prints and Specifications</b>		

Task	SOL Correlations	NCCER Correlations
Draw electrical circuits.	English: 10.5, 11.5  Science: PH.11	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00105 Introduction to Construction Drawings</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26110-20 Basic Electrical Construction Documents</li> </ul>
Read electrical construction drawings and specifications.	English: 10.5, 11.5  Science: PH.11	NCCER Core Curriculum: Introduction to Basic Construction, 2021 <ul style="list-style-type: none"> <li>• 00105 Introduction to Construction Drawings</li> </ul> NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26110-20 Basic Electrical Construction Documents</li> </ul>
<b>Navigating the NEC Book</b>		
Explain the intent of the NEC.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26105-20 Introduction to the National Electrical Code</li> </ul>

Task	SOL Correlations	NCCER Correlations
Interpret NEC requirements for electrical installation.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26105-20 Introduction to the National Electrical Code</li> </ul>
<b>Selecting and Installing Conductors</b>		
Identify various types of conductors and their associated applications.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26108-20 Wireways, Raceways, and Fittings</li> <li>• 26109-20 Conductors and Cables</li> <li>• 26111-20 Residential Wiring</li> </ul>
Install conductors.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26108-20 Wireways, Raceways, and Fittings</li> <li>• 26109-20 Conductors and Cables</li> <li>• 26111-20 Residential Wiring</li> </ul>
Terminate conductors with lugs, connectors, or terminals.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26108-20 Wireways, Raceways, and Fittings</li> <li>• 26109-20 Conductors and Cables</li> </ul>

Task	SOL Correlations	NCCER Correlations
		<ul style="list-style-type: none"> <li>• 26111-20 Residential Wiring</li> </ul>
<b>Identifying Panelboards and Switchboards</b>		
Identify the purpose and location of overcurrent protective devices (OCPDs) and service entrance equipment.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26105-20 Introduction to the National Electrical Code</li> <li>• 26110-20 Basic Electrical Construction Documents</li> </ul>
Explain principles of generating electricity.	English: 10.5, 11.5 Science: PH.10	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> <li>• 26104-20 Electrical Theory</li> </ul>
Explain principles of magnetism and electromagnetism.	English: 10.5, 11.5 Science: PH.10	NCCER Electrical Level 1, 2020 <ul style="list-style-type: none"> <li>• 26103-20 Introduction to Electrical Circuits</li> </ul>
Identify the components of a typical stand-alone generator.	English: 10.5, 11.5	
<b>Exploring Environmentally Friendly Choices</b>		
Identify energy-efficient equipment and methods.	English: 10.5, 11.5	NCCER Electrical Level 1, 2020 26111-20 Residential Wiring

<b>Task</b>	<b>SOL Correlations</b>	<b>NCCER Correlations</b>
Explore the environmental effects of land use and site location for a proposed building project.	English: 10.5, 10.8, 11.5, 11.8	